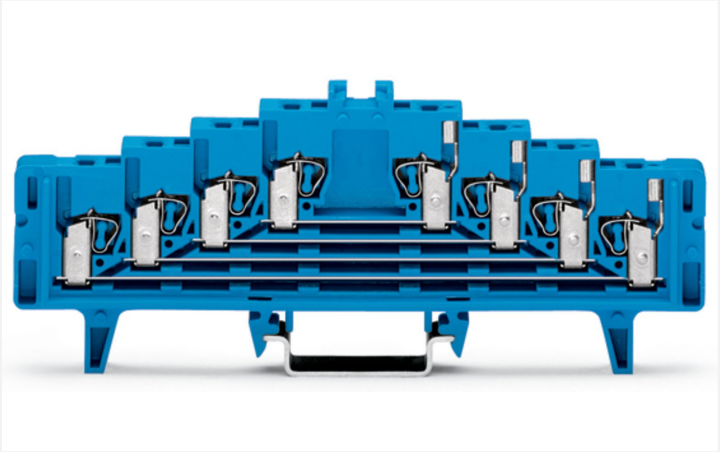
# Data Sheet | Item Number: 727-224/024-000

4-level terminal block for matrix patching; without locking clips; one potential per level; with 2.3 mm Ø test port; marking: d-c-b-a--a-b-c-d; for 35 x 7.5 mounting rail; 1.5 mm²; blue

https://www.wago.com/727-224/024-000



Color: blue

Similar to illustration

Terminal block for matrix patching, 727 Series, blue

Seamless electrical installations are guaranteed with this terminal block for matrix patching (item number 727-224/024-000). Ensure that the strip lengths are between 8 and 10 mm when connecting conductors to this terminal block for matrix patching. Featuring conductor terminals along with CAGE CLAMP®, this product outperforms the competition. Our CAGE CLAMP® connection offers a convenient and maintenance-free way to connect all types of conductors. You do not need to prepare the conductor in any way, such as crimping ferrules. This terminal block for matrix patching is suitable for conductor cross sections ranging from 0.08 mm² to 1.5 mm².

## Notes

| | |
|---|---|
| Safety Information | 60V Ex i application = peak value (table 4, EN 50020) |
| Safety information 2 | When approved by the manufacturer's authorized inspection representative |

## Electrical data

### Ratings per IEC/EN

| | |
|---|---|
| Nominal voltage (III/3) | 250 V |
| Rated impulse withstand voltage (III / 3) | 4 kV |
| Rated current | 12 A |
| Legend (ratings) | (III / 3) ≙ Overvoltage category III / Pollution degree 3 |

### General information

| | |
|---|---|
| Wiring direction | Front-entry wiring |

## Connection Data

| | |
|---|---|
| Clamping units | 16 |
| Total number of potentials | 4 |
| Number of levels | 4 |

### Connection 1

| | |
|---|---|
| Connection technology | CAGE CLAMP® |
| Actuation type | Operating tool |
| Connectable conductor materials | Copper |
| Solid conductor | 0.08 … 1.5 mm² / 28 … 16 AWG |
| Fine-stranded conductor | 0.08 … 1.5 mm² / 28 … 16 AWG |
| Strip length | 8 … 10 mm / 0.31 … 0.39 inches |


Continued on next page

## Connection 1

| | |
|---|---|
| Wiring direction | Front-entry wiring |

## Physical data

| | |
|---|---|
| Width | 7.62 mm / 0.3 inches |
| Height | 126 mm / 4.961 inches |
| Depth from upper-edge of DIN-rail | 44.5 mm / 1.752 inches |

## Mechanical data

| | |
|---|---|
| Marking | d-c-b-a--a-b-c-d |
| Design | horizontal type |
| Mounting type | DIN-35 rail |
| Marking level | Center marking |

## Material data

| | |
|---|---|
| Note (material data) | Information on material specifications can be found here |
| Color | blue |
| Material group | I |
| Insulation material (main housing) | Polyamide (PA66) |
| Flammability class per UL94 | V0 |
| Fire load | 0.495 MJ |
| Weight | 32.3 g |

## Environmental requirements

| | |
|---|---|
| Processing temperature | -35 … +85 °C |
| Continuous operating temperature | -60 … +105 °C |

## Commercial data

| | |
|---|---|
| PU (SPU) | 50 pcs |
| Packaging type | Box |
| Country of origin | DE |
| GTIN | 4045454188986 |
| Customs tariff number | 85369010000 |

## Product Classification

| | |
|---|---|
| UNSPSC | 39121410 |
| eCl@ss 10.0 | 27-14-11-20 |
| eCl@ss 9.0 | 27-14-11-20 |
| ETIM 9.0 | EC000897 |
| ETIM 10.0 | EC000897 |
| ECCN | NO US CLASSIFICATION |


Continued on next page

## Environmental Product Compliance

| | |
|---|---|
| RoHS Compliance Status | Compliant,No Exemption |

## Approvals / Certificates

### General approvals

| Approval | Standard | Certificate Name |
|---|---|---|
| CCA<br>DEKRA Certification B.V. | EN 60947 | NTR NL 7485 |
| CSA<br>DEKRA Certification B.V. | C22.2 No. 158 | 70048845 |
| KEMA/KEUR<br>DEKRA Certification B.V. | EN 60947 | 2192101.01 |

### Declarations of conformity and manufacturer's declarations

| Approval | Standard | Certificate Name |
|---|---|---|
| EU-Declaration of Conformity<br>WAGO GmbH & Co. KG | - | - |
| UK-Declaration of Conformity<br>WAGO GmbH & Co. KG | - | - |

## Downloads

### Environmental Product Compliance

**Compliance Search**

Environmental Product Compliance
727-224/024-000

### CAD/CAE-Data

**CAD data**

2D/3D Models
727-224/024-000

**CAE data**

EPLAN Data Portal
727-224/024-000

WSCAD Universe
727-224/024-000

ZUKEN Portal
727-224/024-000

## 1 Compatible Products

### 1.1 Required Accessories

### 1.1.1 End plate

#### 1.1.1.1 End plate



Item No.: 727-268
4-level end plate; marking: d-c-b-a--a-b-c-d; 7.62 mm thick; blue



Item No.: 727-258
4-level end plate; marking: d-c-b-a--a-b-c-d; 7.62 mm thick; gray



Item No.: 727-208
4-level end plate; marking: d-c-b-a--a-b-c-d; 7.62 mm thick; orange

## 1.2 Optional Accessories

### 1.2.1 DIN-rail

#### 1.2.1.1 Mounting accessories



Item No.: 210-196
Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored



Item No.: 210-198
Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; copper-colored



Item No.: 210-508
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715; silver-colored



Item No.: 210-197
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715; silver-colored



Item No.: 210-506
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715; silver-colored



Item No.: 210-114
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored



Item No.: 210-118
Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored



Item No.: 210-115
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 18 mm; silver-colored



Item No.: 210-112
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 25 mm; silver-colored



Item No.: 210-504
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715; silver-colored



Item No.: 210-113
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored



Item No.: 210-505
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715; silver-colored

### 1.2.2 Ferrule

#### 1.2.2.1 Ferrule



Item No.: 216-301
Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow



Item No.: 216-302
Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise



Item No.: 216-201
Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; acc. to DIN 46228, Part 4/09.90; white



Item No.: 216-101
Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored



Item No.: 216-202
Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray



Item No.: 216-102
Ferrule; Sleeve for 0.75 mm² / 18 AWG; uninsulated; electro-tin plated; silver-colored



Item No.: 216-203
Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red



Item No.: 216-103
Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated



Item No.: 216-204
Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black



Item No.: 216-104
Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated; silver-colored

### 1.2.3 Installation

#### 1.2.3.1 Mounting accessories



Item No.: 249-109
Wire harness support; gray


Continued on next page

## 1.2.4 Insulation stop

### 1.2.4.1 Insulation stop



Item No.: 727-197
Insulation stop; 0.08 - 0.2 mm² "s" (0.14 mm² "f-st"); 8 pieces/strip; white



Item No.: 727-199
Insulation stop; 0.25 - 0.5 mm² "s+f-st"; 8 pieces/strip; dark gray



Item No.: 727-198
Insulation stop; 0.25 mm² “s”; 0.14 - 0.25 mm² “f-st”; 8 pieces/strip; light gray

## 1.2.5 Jumper

### 1.2.5.1 Jumper



Item No.: 709-107
Wire commoning chain; 0.5 mm²; insulated; gray

## 1.2.6 Marking

### 1.2.6.1 Double marker carrier



Item No.: 209-128
Adaptor; gray

### 1.2.6.2 Marker



Item No.: 793-5501/000-006
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; blue



Item No.: 793-5501/000-007
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; gray



Item No.: 793-5501/000-023
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; green



Item No.: 793-5501/000-017
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; light green



Item No.: 793-5501/000-012
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; orange



Item No.: 793-5501/000-005
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; red



Item No.: 793-5501/000-024
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; violet



Item No.: 793-5501
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white



Item No.: 793-5501/000-002
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; yellow



Item No.: 793-501/000-006
WMB marking card; as card; not stretchable; plain; snap-on type; blue



Item No.: 793-501/000-007
WMB marking card; as card; not stretchable; plain; snap-on type; gray



Item No.: 793-501/000-023
WMB marking card; as card; not stretchable; plain; snap-on type; green



Item No.: 793-501/000-017
WMB marking card; as card; not stretchable; plain; snap-on type; light green



Item No.: 793-501/000-012
WMB marking card; as card; not stretchable; plain; snap-on type; orange



Item No.: 793-501/000-005
WMB marking card; as card; not stretchable; plain; snap-on type; red



Item No.: 793-501/000-024
WMB marking card; as card; not stretchable; plain; snap-on type; violet



Item No.: 793-501
WMB marking card; as card; not stretchable; plain; snap-on type; white



Item No.: 793-501/000-002
WMB marking card; as card; not stretchable; plain; snap-on type; yellow



Item No.: 2009-115/000-006
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue



Item No.: 2009-115/000-007
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray


Continued on next page

### 1.2.6.2 Marker



Item No.: 2009-115/000-023
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green



Item No.: 2009-115/000-017
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; light green



Item No.: 2009-115/000-012
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange



Item No.: 2009-115/000-024
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet



Item No.: 2009-115
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white



Item No.: 2009-115/000-002
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow

## 1.2.7 Test and measurement

### 1.2.7.1 Testing accessories



Item No.: 210-297
Step-down test plug; from 4mm socket to 2mm plug; red

## 1.2.8 Tool

### 1.2.8.1 Operating tool



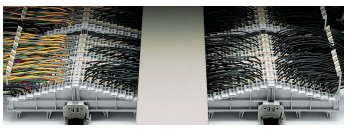
Item No.: 210-719
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft



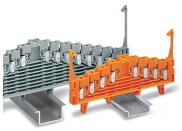
Item No.: 210-647
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft; multicoloured

## Installation Notes

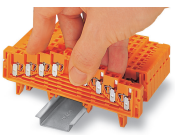
### Installation



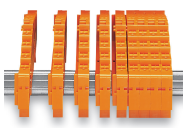
Example of matrix patching assembly
Left: Main cables fed through locking clips on the field side
Right: Control cables fed between locking clips
Center: Wiring of both patching sides



Terminal blocks for DIN-35 x 7.5 mm or DIN-35 x 15 mm rails are available.



Snap individual 4- or 8-level terminal blocks onto the DIN-rail.

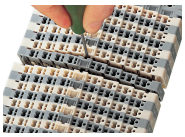


Slide terminal blocks together.

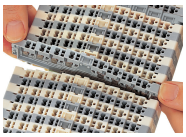


Grip end plate at both sides and:

- push down (assembly)
- pull up (removal)



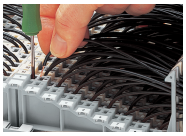
Open the assembly by laterally sliding a block via operating tool (2.5 x 0.4 mm blade).



Slide terminal block and remove from the rail with a levering action.

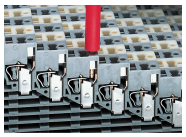

Continued on next page

## Conductor termination



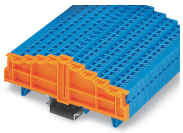
**CAGE CLAMP® connection**
Inserting a conductor via 210-719 Operating Tool (2.5 x 0.4 mm blade).
Max. cross-section for uninsulated ferrules 1 mm² (18 AWG), for insulated ferrules 0.75 mm² (20 AWG)

## Testing

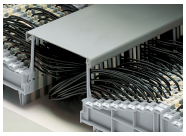


Special test contact for step-down test plug; from 4 mm socket to 2 mm plug; max. 42 V

## Ex application

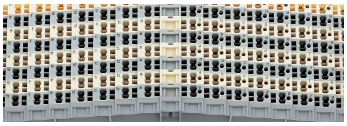


Blue terminal blocks for matrix patching are suitable for Ex i applications.

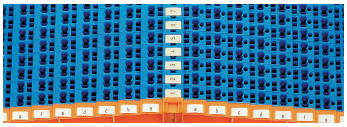


Using terminal blocks with locking clips, the wiring space between the terminal strips can be covered with a wiring duct cover.

## Marking



Connection points identified via factory-direct printing



Marking coordinates via WMB Multi Marking System.